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10/583,018

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EXAMINER

GREEN, TRACIE Y

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,018	Applicant(s) ITO, NOBUYUKI	
	Examiner TRACIE Y. GREEN	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-8, 16-30, 32 and 34 is/are pending in the application.
- 4a) Of the above claim(s) 18-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-8, 16-17, 29, 30, 32 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Receipt is acknowledged of applicant's amendment filed 09/23/2008. Claims 3-8, 10-30, 32 and 34 are pending and an action on the merits is as follows.
2. Title and abstract have been amended, objection to specification is withdrawn.
3. Claims 31, 33 and 35 have been cancelled therefore objection to claims are hereby withdrawn.

Election/Restrictions

4. Newly amended claims directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Specifically, claims 16-28 were amended to a process of making the claimed device.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 16-28 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 3-8 and 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Takako (Japanese Patent 2002-237382, machine translation).

Regarding claim 3, Takako teaches an organic functional element (Drawing 2) comprising at least a plurality of electrodes (2,5) and an organic material layer (3), wherein at least one of the electrodes (Table 1, lines 11) is composed of a metal having a melting point of 70.degree. C or higher to 160.degree. C. or lower (Paragraph 29, lines 1-3) (*Examiner note: Indium melting temperature =156.61*)

Regarding claim 4, Takako teaches wherein the metal constituting the electrode is an alloy of Bi and at least one kind of other metals (Table 1, lines 9, 10 or 17)

Regarding claim 5, Takako teaches wherein a Bi component in the metal constituting the electrode is greater than that of at least one kind of other metals (Table 1, lines 11)

Regarding claim 6, Takako teaches, wherein the metal constituting the electrode is an alloy composed of Bi and one, two, three, four or five kinds of metals selected from a group composed of Sn, Pb, Cd, Sb and In. (Table 1, lines 2)

Regarding claim 7, Takako teaches wherein the metal constituting the electrode is an alloy of Sn and Bi, and a Sn component is greater than a Bi component. . (Table 1, lines 8-10)

Regarding claim 8, Takako teaches wherein the metal constituting the electrode is an alloy of In and Sn (Table 1, lines 11)

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Regarding claim 29, Takako teaches wherein the organic functional element is an organic EL element. (Paragraph 15, lines 1-3)

Regarding claim 30, Takako teaches wherein the electrode is a cathode (Paragraph 29, lines 1-2)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 16-17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takako (Japanese Patent 2002-237382, machine translation) in view of Vleggaar et al. (US Patent 6,160,346).

Regarding claims 16-17, Takako teaches the organic functional element set forth above (see rejections claims 1 and 9) above. Takako is silent regarding wherein a gap made between the organic material layer and a base material having a concave part opposite to the organic material layer is filled and formed with the metal (claim 16) and wherein the gap has one or more opening parts, and the opening parts are sealed with a hardened metal (claim 17).

In the same field of endeavor of organic devices, Vleggaar et al. teaches (Figure 1 or 2) wherein a gap made between the organic material layer (4) and a base material

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(8) having a concave part (8, 9) opposite to the organic material layer (4) is filled and formed with the metal (5,9) and wherein the gap (Figure 2, 34) has one or more opening parts, and the opening parts are sealed with a hardened metal (29,33) in order to provide is to provide an EL device which is compact and robust under normal production and operating conditions, and which exhibits a satisfactory resistance to mechanical and varying thermal loads (Column 2, lines 15-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the organic function element of Takako wherein a gap made between the organic material layer and a base material having a concave part opposite to the organic material layer is filled and formed with the metal (claim 16) and wherein the gap has one or more opening parts, and the opening parts are sealed with a hardened metal in order to provide is to provide an EL device which is compact and robust under normal production and operating conditions, and which exhibits a satisfactory resistance to mechanical and varying thermal loads as taught by Vleggaar et al.

8. Claim 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takako (Japanese Patent 2002-237382, machine translation) in view of Hosokawa (US 2001/0011783 A1).

Takako teaches the organic functional element set forth above (see rejections claims 1 and 9) above. Takako is silent regarding wherein the organic functional element is an organic semiconductor element (claim 32); and wherein the organic functional element is an organic TFT element (claim 34).

In the same field of endeavor of organic devices, Hosokawa teaches (Figures 7 or 8) wherein the organic functional element is an organic semiconductor element (10, 14 and Paragraph 32); and wherein the organic functional element is an organic TFT element (10, 14 and Paragraph 71) in order to provide a device with a reduction in the current density thus leading to prolonged operation (Paragraph 34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the organic function element of Takako wherein the organic functional element is an organic semiconductor element; and wherein the organic functional element is an organic TFT element in order to provide a device with a reduction in the current density thus leading to prolonged operation as taught by Hosokawa.

Response to Arguments

9. Applicant's arguments filed 09/23/2008 have been fully considered but they are not persuasive. Specifically, applicant argues in claim 3 that the examiner's cited prior art reference does not disclose " wherein at least one of the electrodes is composed of a metal having a melting point of 70.degree. C. or higher to 160.degree. C. or lower". Applicant expressed that the examiner must take into consideration the alloy being taught by the primary reference. In doing so, applicant believes examiner's rejection as anticipatory is incorrect.

Examiner draws the applicant's attention is drawn to claim 3 which recites " wherein at least one of the electrode is composed of a metal having a melting point of 70.degree. C. or higher to 160.degree. C. or lower. Examiner first notes that nowhere

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does the claim state that the entire electrode is made from a metal or alloy having this particular melting point. Examiner further notes that the claim does not necessarily exclude the use of an alloy. As such the table (Table 1, line 11) as disclosed by Takakao, discloses a metal which is used to make the alloy satisfying the limitation " wherein at least one electrode is composed of a metal..." Examiner believes that the broadest and reasonable interpretation has been taken in consideration for these claims as such the rejections remains unchanged with the independent claim remaining anticipated.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRACIE Y. GREEN whose telephone number is (571)270-3104. The examiner can normally be reached on Monday-Thursday, 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571/272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Tracie Y Green/
Examiner, Art Unit 2879

/Sikha Roy/
Primary Examiner, Art Unit 2879